

# BOBCAT

## INTELLIGENT CAMERA SERIES

### ICL-B2510



**IMPERX** ICL-B2510 is an advanced progressive scan, fully programmable CCD camera designed for imaging applications that require high quality images, powerful features and flexibility. The camera is small, light weight, and built around SONY's ICX-655, 3.45 micron interline transfer CCD image sensor with a 2/3" optical format.

IMPERX ICL-B2510 provides an image resolution of 2456 x 2058 and delivers up to 9.6 frames per second at full resolution. The camera's 14 bit internal data image processing engine is based on an industrial grade high-speed, high-density FPGA, enabling a broad standard feature set and easy implementation of demanding custom imaging solutions. The thermally optimized, mechanical and electrical design plus the extended operating temperature range (-40°C to +85°C), and high MTBF of 660,000 hours @ 40C, make this Camera Link® camera a perfect fit for the most demanding industrial, medical, scientific and military applications. This camera is also available with CoaXPress or GigE Vision® interfaces.

#### Features

2456/2448 x 2058/2050

Mono or color 8, 10, 12, 14 single, RGB 24 bit output

Normal and over-clock operation (6.5/9.6 fps)

Base Camera Link, PoCL support

RS232 serial communication

Analog and digital gain and offset control

1x, 2x, 3x, 4x, 8x horizontal and vertical binning

Eight (8) independent horizontal and vertical AOIs

Programmable horizontal and vertical resolution

Programmable line time, frame time and speed

Programmable external trigger

Internal/External exposure control

Standard, fast, frame accumulation, double and asynchronous triggering modes

Automatic gain, exposure and iris control

Automatic white balance

Internal/External H and V sync input/output

Left/right digital bit shift

Test image with image superimposition

Built in pulse generator

Programmable I/O mapping

Dynamic transfer function correction

Dynamic black level correction

Defective and hot pixel correction (static/dynamic)

Temperature monitor

Field upgradeable firmware

Customer defined Look Up Table (LUT)

Reverse image H mirror (optional)

MTBF of 660,000 hours @ 40°C

#### APPLICATIONS

Aerial Mapping

Aerial Robots: Military, Police

Aerospace

Agriculture

Automation

Automotive

Biometrics

Broadcasting

Printed Circuit Board (PCB)

Electronics

Energy/Solar/Wind Power

Flat Panel Inspection

Food/Beverage

Homeland Security

Law Enforcement

Intelligent Traffic Systems (ITS)

Medical Devices/Imaging

Metrology

Microscopy

Military/Defense

Pharmaceuticals

Particle Image Velocimetry (PIV)

Radiology

Robotics

Scientific Apps

Surveillance

Semiconductors

Transportation

Textile/Apparel

# IMPERX

# BOBCAT ICL-B2510 Specifications

|                    |   |
|--------------------|---|
| Maximum Resolution | 2456 x 2058                                   |
| Sensor Type        | ICX-655, CCD, 2/3" optical format             |
| Pixel Size         | 3.45 µm                                       |
| Frame Rate         | 6.5/9.6 fps (normal/overclock)                |
| Max Frame Rate     | 50 FPS  |
| Minimum S/N ratio  | 53 db   |
| Video Output       | Base Camera Link, mini CL interface, PoCL     |
| Output Format      | Mono or color 8, 10, 12, 14 bit single output |
| Binning H & V      | x1, x2, x3, x4, x8                            |
| Area of Interest   | 8 independent AOIs, 2 x 2 to 2456 x 2058      |
| Shutter Speed      | 1/80,000 to 1/11 sec (nom)                    |
| Long Integration   | Up to 16 sec                                  |
| Gamma Correction   | G=1.0, G= 0.45, user upgradable LUT           |
| Video Gain         | 36 dB range, 1024 steps, 0.0351 dB per step   |
| Exposure and AGC   | Manual, Auto, Programmable                    |
| Iris Control       | Auto, Programmable                            |
| Strobe Output      | Programmable position and duration            |
| Image Overlay      | Yes, Programmable                             |
| RS232 Interface    | Yes   |

Data Corrections  
Hardware Trigger

Software Trigger

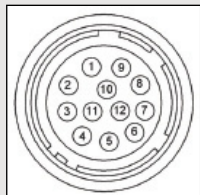
Trigger Modes

Min. Illumination  
Supply Input Range  
Power Consumption  
Size (W x H x L)  
Weight  
Lens Mount  
Vibration, Shock  
Environmental

Humidity  
MTBF  
Regulatory

DPC, HPC, LUT  
LVTTTL or TTL via IN1/IN2, level, edge, pulse-width, programmable  
Frame grabber via CC1/CC2, level, edge, pulse-width, programmable  
Programmable, standard, double exposure, fast, frame accumulation, asynchronous  
0.5 Lux, F/1.4  
12 VDC, (10V min, 15V max)  
2.4 W, 200 mA steady, 1.5 A inrush  
46 x 46 x 39mm  
137g  
C-Mount  
10G (20 - 200) Hz XYZ, 70G  
Operation (-40° to +85°C)  
Storage (-40° to +90°C)  
10% to 90% non-condensing  
660,000 hours @ 40°C  
FCC 15 part A, CE, RoHS

## Power and I/O Interface:



|   |               |    |              |
|---|---------------|----|--------------|
| 1 | 12V DC Return | 7  | OUT1 Signal  |
| 2 | +12V DC       | 8  | IN1 Signal   |
| 3 | IRIS VCC      | 9  | IN2 Signal   |
| 4 | IRIS Video    | 10 | IN1/2 Return |
| 5 | IRIS Return   | 11 | Reserved     |
| 6 | OUT1/2 Return | 12 | OUT2 Signal  |

Connector: Hirose HR 10A-10R-12PB(71)

## Order Options:

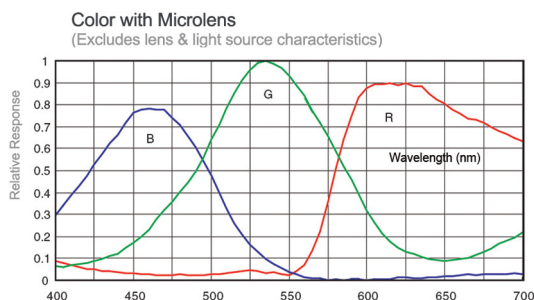
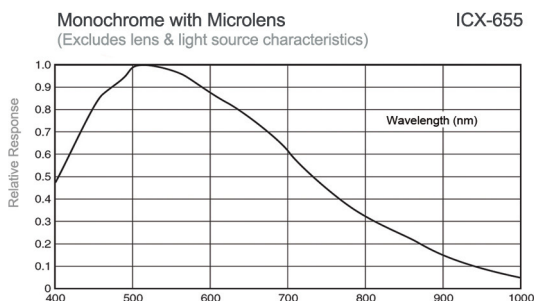
ICL-B2510M-SCO Monochrome CameraLink Output  
ICL-B2510C-SCO Color CameraLink Output

For specific details and ordering information, consult the camera user's manual or contact IMPERX at sales@imperx.com.

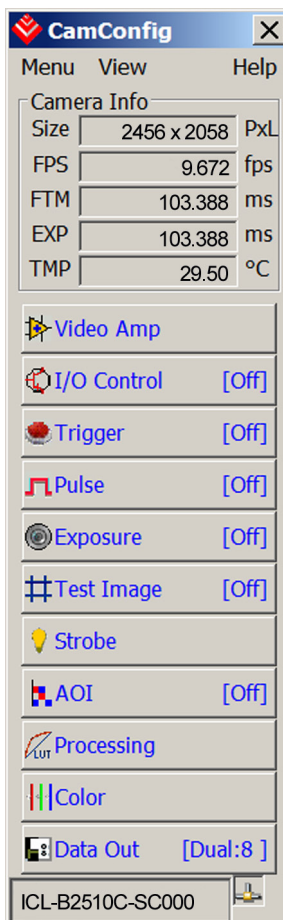
## Accessories:

PS12V04: Power Supply (sold separately)

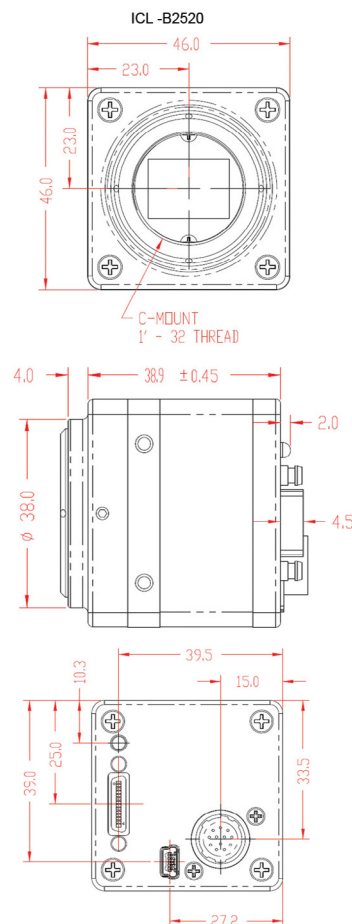
## Spectral Response



## Software/Drivers/Interface



## Mechanical Dimensions



IMPERX | 6421 Congress Avenue | Boca Raton | FL 33487 | USA  
Phone: +1-561-989-0006 | 1-866-849-1662 | Fax: +1-561-989-0045  
www.imperx.com | sales@imperx.com

Copyright © 2013. IMPERX product information subject to change without notice.

